Environmentally Significant Areas in the Saint John Planning Region of New Brunswick

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INTRODUCTION

This presentation identifies and provides background information on environmentally significant areas in the Saint John Planning Region of New Brunswick. Environmentally significant areas are those considered to be ecologically fragile in that human activities may upset the natural balance or diversity of the ecosystems therein. These areas have special appeal because they provide unique habitats for many of the floral and faunal resources of the Region. Human impacts on these significant areas tend to reduce their suitability or in the extremes can entirely destroy the ecology of the areas.

Data were gathered from a variety of published and unpublished sources, but the bulk came from interviews conducted with persons knowledgeable about the particular resources of the Region. A list of these individuals is included in this report as pertinent information sources. The information provided is based on current knowledge and in some cases is incomplete. The format used here provides for additions, deletions or modifications as more data become available.

Nine categories of significant areas (with appropriate symbols) were selected as shown on page 3. Each area described in this study is assigned to one or more of these categories. For example, a particular coastal island could be identified as ER, CI, RE and BB, that is, an island that is (or has) a proposed ecological reserve and also contains rare and endangered species habitat and special breeding bird habitat. Areas are listed alphabetically under the appropriate categories.

The annotated list of over 90 areas identified in the Saint John Planning Region is organized by county and geographic location. Charlotte County is divided into mainland and marine sections; marine refers to all coastal and offshore locations.

Each area has an identification number that is keyed to its location on the accompanying map of the Region. In a few instances, more than one area is grouped under a broader heading such as a river system or large island. This in no way minimizes the importance of these individual sites and is simply done to make the presentation more comprehensive and less cumbersome to use.

Universal Transverse Mercator (UTM) coordinates and 1:50,000 map references are given for each area; the abbreviated UTM values are used as shown in the legend of any appropriately scaled topographic map. Generally, the coordinates locate the center of an area except in the case of rivers where the location of the river mouth is given. Exact boundary definition of some areas, such as deer wintering areas, is not always possible. In such cases, the central coordinates used are as accurate as the information allows.

A list of general references that may prove useful is also included in this report. It is not meant to be exhaustive. Up-to-date information on the areas may be obtained from the sources given at the end of each description.

CATEGORIES OF ENVIRONMENTALLY SIGNIFICANT AREAS

AREAS	SYMBOL	PAGE
Wetlands	W	4
Ecological Reserves	ER	6
Coastal Islands	CI	7
Rare and Endangered Species Habitats	RE	8
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WETLANDS (W)

Wetlands are wet environments characterized by saturated soils which support plant life and animals adapted to life in a wet environment. Wetlands found in New Brunswick include bogs, fens, marshes, swamps, shallow open water areas and tidal mud flats; the key wetlands in the Saint John Planning Region are the fresh and salt water marshes. The functions (values) of these areas include flood control, ground water control, sediment and erosion control, nutrient removal, wildlife habitat, fish habitat, nutrient provision, wild plant crops, recreation, education and scientific research. The flood plain marshes of the lower Saint John River Valley are especially important even though each and every one may not be identified here as an environmentally sensitive area. Coastal marshes, few in number in the region, are significant as well since they are ecologically linked to the aquatic production of both estuaries and in-shore tidal waters.

Continued urban expansion can have serious consequences to wetlands, as can the impacts of mining, solid waste disposal, landfill, sewage treatment and agricultural reclamation. Many of these impacts have, in fact, been evident on some of the marshes in the region. It is important to note that adverse human encroachments on waterways may also affect the wetlands that exist on these drainages.

The Wetlands considered here and their identification numbers are listed below:

Anagance Marsh (8)
Anderson Lake (41)
Belleisle Bay, headwaters of (15)
Bloomfield Marsh (16)
Canoose Flowage (67)
Castalia Marsh (Grand Manan Island) (87)
Cranberry Lake (65)
Evandale Marsh (24)
Grassy Island (26)
Green Brown Brook (68)
Hampton Fresh Water Marsh (22)
Isle of Pines (27)
King Brook Lake (69)
Long Island (3)
Lower Kennebecasis Marsh (18)
Lower Musquash Island (2)
Musquash Salt Marsh (40)
Nerepis River, mouth of (6)
Ossekeag Marsh (19)
Passekeag Marsh (17)
Ravine Brook Marsh (20)
Red Head Marsh (36)
Saints Rest Marsh (38)
Spoon Island (4)
St. Martins Marsh (33)
Three Brooks Marsh (66)

ECOLOGICAL RESERVES (ER)

An ecological reserve is a unit of plants, animals and the physical environment that is legally protected so as to keep human interference to an absolute minimum in perpetuity. These reserves are permitted to follow the normal pattern of succession towards a mature ecosystem and are units of landscape which represent examples of the ecological diversity found in New Brunswick. Buffer zones must be included to prevent the encroachment of undesirable human activities. Fifteen areas in the Saint John Planning Region have been proposed as reserves; two of these (Loch Alva and Cranberry Lake) have been designated by legislation. Impacts on the areas to date have included cattle grazing, wood harvesting, residential development, highway construction, landfills and tourist disturbance.

The Ecological Reserves considered and their identification numbers are listed below:

Baillie Settlement (64)
Campobello Liberty Point (80)
Cape Spencer (35)
Cranberry Lake (1)
Hampton Freshwater Marsh (22)
Hampton Talus Slope (21)
Hardwood Island (83)
Little Salmon River (30)
Little Tomoowa Lake (46)
Loch Alva (29)
Machias Seal Island (91)
McManus Hill (7)
Musquash Salt Marsh (40)
Picadilly Mountain (11)
St. Croix Islands (St. Croix River) (70)

COASTAL ISLANDS (CI)

New Brunswick does not have many coastal islands, i.e. offshore islands, rocks and ledges, and the majority is found in the southwestern part of the Saint John Planning Region. Their natural beauty and remoteness are attractive to both tourists and recreationists. In addition, the high productivity of the surrounding waters supports large numbers of island breeding birds. The importance of these islands is reflected in the current practice of not selling or renewing leases on Crown owned islands. Most of the islands or island groups listed below offer no immediate environmental concerns. However, some have experienced human impacts to date that have included fish plant and industrial waste disposals, the dumping of dredged materials and tourist distrubances.

The Coastal Islands considered here are:

Campobello Island (80)
Deer Island (82)
Frye Island Group (74)
Gannet Island, ledges south of (90)
Grand Manan Island (87)
Hardwood Island (83)
Kent Island (89)
Machias Seal Island (91)
Manawagonish Island (39)
Ministers Island (84)
Nantucket Island (88)
White Island (78)
White Horse Island (75)
The Wolves (72)

RARE AND ENDANGERED SPECIES HABITATS (RE)

In 1974 the province enacted the Endangered Species Act, identifying the Canada lynx, eastern panther, bald eagle, peregrine falcon and osprey as endangered, that is, threatened with extinction because of destruction or modification of habitat, disease, over-exploitation, predation, use of chemicals, or any combination of these. Later, the Furbish lousewort was added to that list.

Only the bald eagle and osprey will be considered here. Other species are not accounted for because of the following reasons. Neither the Canada lynx nor the Furbish lousewort is normally found in the Saint John Planning Region. The eastern panther, though reported a number of times over the years in the Region, is so elusive and mobile that no attempt can be made to define specific sensitive areas of its range at this time. The peregrine falcon, once a breeding bird in this Region (on Grand Manan), is now uncommonly seen during spring and fall migration and no specific areas of importance have been identified. Numerous species of rare plants and plant habitats have been found in the Planning Region but they are much too numerous and sometimes lack site specificity to be presented here. Hinds (1982) describes 4 areas in Queens County, 26 in Kings (mostly on Belleisle Bay and Kennebecasis Bay and River), 11 in Saint John (centered around the Parish of Saint John and near St. Martins), and 50 areas in Charlotte County (33 inland and 17 marine) with 9 on Grand Manan.

Bald eagle breeding sites are sparsely scattered in the southwestern part of the Region, mostly in the Passamaquoddy Bay-Grand Manan Archipelago areas. These birds usually return each year to traditional nesting sites. Ospreys breed mainly along the coastal areas and off-shore islands of the region with some scattered nesting inland. In spite of the endangered status of this bird, populations appear to be increasing in the province. Because of this, few sites have been designated as sensitive areas and only those locales with concentrations of nesting ospreys are considered here.

Adverse human impacts on the habitats to date have included wood harvesting, cattle grazing, recreational disturbances, shooting and tourist disturbances.

Following is the list of Rare and Endangered Species Habitats:

Campobello Island (80)
Central Hampstead (5)
Deer Island (82)
Frye Island Group (74)
Grand Manan Island (87)
Hog Island (25)
Lake Utopia - North (52)
Lake Utopia - West (53)
Limeburners Lake (60)
St. Croix Mountain (62)
St. Croix River (70)
White Island (78)

BREEDING BIRD HABITATS (BB)

Numerous areas in the Saint John Planning Region are especially important to breeding birds, mostly waterfowl and colonial nesting birds. Most of the waterfowl breeding areas in the region have some environmental limitations yet these lands range in production capabilities from moderate to very high (Anonymous 1967). The islands and marshes in the Lower Saint John River are particularly notable in this respect.

The coastal islands in the region support significant breeding populations of sub-arctic birds. Colonial breeders (marine and wading birds) are concentrated on the Passamaquoddy Bay Islands, the Fundy Isles and the Grand Manan Archipelago.

Environmental impacts of concern appear to be cattle grazing, boating, road construction, dredging, filling and tourist disturbance.

Breeding Bird Habitats considered here are:

Gannet Island, ledges south of (90)
Grassy Island (26)
Hampton Freshwater Marsh (22)
Hardwood Island (83)
Head Harbour Passage (79)
Isle of Pines (27)
King Brock Lakes Marsh (69)
Kent Island (89)
Letite Passage (77)
Long Island (3)
Lower Musquash Island (2)
Maces Bay (71)
Machias Seal Island (91)

Breeding Bird Habitats (continued)

Manawagonish Island (39)
Musquash Salt Marsh (40)
Nantucket Island (88)
Nerepis River, mouth of (6)
Red Head Marsh (36)
Spoon Island (4)
White Horse Island (75)
The Wolves (72)

OTHER UNIQUE BIRD HABITATS (UB)

Certain areas in the Saint John Planning Region provide important bird habitats other than those used for breeding. These include areas used by shorebirds for feeding, staging and wintering. Especially important are the tidal flats used during fall migration where these birds build up fat reserves. The aquatic areas used by marine birds for feeding and staging are also significant. Additionally, waterfowl require certain locales for moulting, feeding and staging. Impacts on these habitats to date have included the effects of residential development, highway construction, municipal and industrial waste disposals, erosion and siltation, pulp and paper mills, petroleum wastes, dumping and landfills.

The Unique Bird Habitats considered here are:

Courtney Bay (37)
Deer Island (82)
Digdeguash Harbour (58)
Grassy Island (26)
Grand Manan Island (87)
Head Harbour Passage (79)
Letang Estuary (73)
Letite Passage (77)
Maces Bay (71)
Ministers Island (84)
Musquash Salt Marsh (40)
Quaco Bay (32)
Saints Rest Marsh (38)
St. Andrews, headland of (85)
St. Croix Estuary (86)
St. George Harbour (76)
The Wolves (72)

DEER AND MOOSE WINTERING AREAS (DW)

Throughout New Brunswick, deer and moose tend to concentrate in traditional areas during the winter for the purposes of obtaining shelter and food. In the more northern inland areas of the province, these sites, commonly called deer yards, are rather rigidly defined, influenced from year to year by the severity of the weather, the changing habitat and the food availability. However, in the Saint John Planning Region, and especially in the southern coastal areas where snow cover is lighter and the weather milder, loose aggregates of these wintering animals are more likely to be seen than the well defined concentrations found further north. Hence, it is difficult to pinpoint specific deer or moose yards in this Region and only the broader wintering areas are recognized. It is important to note that these locations may change over time just as the natural plant succession of the wintering habitats will change. Consequently, it is necessary to protect from adverse human disturbance not only the yarding areas but also surrounding buffer zones. Major impacts on the wintering areas to date have included snowmobiling, highway construction, residential development, wood harvesting and flooding.

Eight deer wintering areas and 1 moose concentration (East Long Lake) are listed below:

Digdeguash Lake - East (56)
Digdeguash Lake - West (57)
East Long Lake (43)
East Musquash (42)
Magaguadavic River (54)
McDougall Lake (51)

Deer and moose wintering areas (continued):

Penobsquis (9)
Thorne Brook (12)
St. Croix River (70)

FISH SPAWNING AND NURSERY AREAS (SN)

Essentially all rivers in the Saint John Planning Region have value for sport fish. However, those which are important to Atlantic salmon are considered to be particularly unique. Spawning and nursery areas are critical to the survival and perpetuation of the Atlantic salmon and other salmonids. A good flow of cold water over a gravel or rocky stream or river bed is a requirement for adequate rearing habitat. The Saint John Planning Region includes at least 13 rivers which support runs of spawning salmon. In most instances, the entire stretch of a river, as given here, is considered significant since individual segments of sites have not been identified at this time. Any obstacles to the upstream migration of salmon can influence the production of the rivers. Human activities of concern on these rivers to date have included urbanization, municipal and industrial waste disposals, land-fills, mining, and incidental catch in the commercial fishery.

Fish Spawning and Nursery Areas considered here are:

Big Salmon River (31)
Black River (34)
Dennis Stream (63)
Digdeguash River (58)
Hammond River (23)
Kennebecasis River (14)
Magaguadavic River (54)
Nerepis River (6)
New River (44)
Piskahegan River (55)
Pocologan River (45)
St. Croix River (70)
Waweig River (61)

OTHER UNIQUE FRESHWATER HABITATS (UF)

Freshwater lakes in the region are important and unique for a variety of reasons and are all considered to be environmentally sensitive. Some are especially significant in that they provide coldwater habitat for important species of fish. For example, of the two lakes in the province containing self perpetuating populations of arctic char, one is found in this Region. Natural or man induced eutrophication (enrichment) can degrade coldwater lakes to the point where certain populations of fish can no longer survive. Thus, these environs become increasingly important and environmentally sensitive.

These Unique Freshwater Habitats are listed below:

Chamcook Lake (59)
Clear Lake (49)
Dicks Lake (13)
Lake Anthony (50)
Loch Alva (29)
South Oromocto Lake (47)
Walton Lake (10)
West Long Lake (48)

ENVIRONMENTALLY SIGNIFICANT AREAS

QUEENS COUNTY

AREA	I. D. NO.	PAGE
Cranberry Lake	1	18
Lower Musquash Island	2	19
Long Island	3	20
Spoon Island	4	21
Central Hampstead	5	22
Nerepis River	6	23

18.
CRANBERRY LAKE - 1

County: Queens Parish: Brunswick

UTM Coordinates: 21G/9E 333-635

Category: ER

Description of Area:

An extensive 115 acre red oak forest community, located near Cranberry Lake. Surrounding areas have been clearcut. This predominantly red oak - red maple forest, with impressive sized trees is very rare in the province. Additional descriptive information can be found in Wein (1975).

Sources of Information

Publications:	Personal Communication:
Wein 1975	Taylor

LOWER MUSQUASH ISLAND - 2

County: Queens **Parish:** Hampstead

UTM Coordinates: 21G/9E 284-652

Category: W, BB

Description of Area:

A 1092 acre island in the lower Saint John River, with 375 acres of marsh surrounding open water in the center. Overgrazing by free roaming cattle has resulted in island erosion. The area serves as an important nesting, feeding, moulting and resting site for waterfowl, and the marsh supports other aquatic birds and mammals, chiefly furbearers. Ospreys also nest on the area.

Sources of Information

Publications:

Choate 1973

Choate 1978

Personal Communication:

Baird

Cartwright

Christie

LONG ISLAND - 3

County: Queens **Parish:** Hampstead

UTM Coordinates: 21G/9E 274-576

Category: W, BB

Description of Area:

An island in the Saint John River south of Lower Musquash Island, 1650 acres in total, with 864 acres of marsh. Overgrazing has affected marsh productivity and increased island erosion since cattle freely roam the area. Nesting, feeding, moulting and resting waterfowl make extensive use of the island as do other aquatic birds and furbearers.

Sources of Information

Publications:

Choate 1973

Choate 1978

Personal Communication:

Baird

Cartwright

Christie

Stewart

SPOON ISLAND - 4

County: Queens **Parish:** Hampstead

UTM Coordinates: 21G/9E 290-550

Category: W, BB

Description of Area:

A Saint John River island south of Long Island with 199 acres of the 231 acres in good quality marsh. Important molting area for ducks. Overgrazing has destroyed much of the marsh habitat on the island.

Sources of Information

Publications:

Choate 1973
Choate 1978

Personal Communication:

Baird

CENTRAL HAMPSTEAD - 5

County: Queens **Parish:** Hampstead

UTM Coordinates: 21G/9E 250-590

Category: RE

Description of Area:

A bald eagle nest site occupied for many years, on the side of a wooded ravine, not far from the east boundary of CFB Gagetown. Wood harvesting operations are encroaching from the south.

Sources of Information

Publications:	Personal Communication:
Stocek and Pearce 1981	Stocek

NEREPIS RIVER - 6

County: Queens (Kings, in part) **Parish:** Petersville (Westfield, in part)

UTM Coordinates: 21G/8W 160-275

Category: SN

Description of Area:

A late run salmon river with considerable spawning and nursery areas. Much of the river, including the headwaters, is located on CFB Gagetown, where the impact of military use on the waterway and surrounding areas is uncertain.

Sources of Information

Publications:

Personal Communication:

Ayer
Cronin
Francis

ENVIRONMENTALLY SIGNIFICANT AREAS
KINGS COUNTY

AREA	I. D. NO.	PAGE
McManus Hill	7	25
Anagance Marsh	8	26
Penobsquis	9	27
Walton Lake	10	28
Picadilly Mountain	11	29
Thorne Brook	12	30
Dicks Lake	13	31
Kennebecasis River	14	32
Belleisle Bay Headwaters	15	33
Bloomfield Marsh	16	34
Passekeag Marsh	17	35
Lower Kennebecasis Marsh	18	36
Ossekeag Marsh	19	37
Ravine Brook Marsh	20	38
Hampton Talus Slope	21	39
Hampton Freshwater Marsh	22	40
Hammond River	23	41
Evandale Marsh	24	42
Hog Island	25	43
Grassy Island	26	44
Isle of Pines	27	45
Mouth of Nerepis River	28	46
Loch Alva	29	47

McMANUS HILL - 7

County: Kings **Parish:** Waterford

UTM Coordinates: 21H/11E 322-572

Category: ER

Description of Area:

A rich east facing hardwood forest, this 32 acre site supports large sugar maple, beech and yellow birch. The diversity of the flora makes it interesting and it is almost completely undisturbed. Wein (1975) gives additional information on this area.

Sources of Information

Publications:
Wein 1975

Personal Communication:
Taylor

ANAGANCE - 8

County: Kings Parish: Cardwell

UTM Coordinates: 21H/14W 224-787

Category: W

Description of Area:

A managed 150 acre beaver meadow of good quality.

Sources of Information

Publications:

Personal Communication:

Stewart

PENOBSQUIS - 9

County: Kings **Parish:** Cardwell

UTM Coordinates: 21H/14E 150-719

Category: DW

Description of Area:

A deer wintering area along the Kennebecasis Valley, extending from Portagevale to Sussex on the south side of the river. A large area with as many as 700 animals using the lower wooded slopes. A few smaller concentrations are also present. Urbanization and industrialization are a threat as Sussex continues to expand and more summer homes are constructed in the valley.

Sources of Information

Publications:

Personal Communication:

Pettigrew

WALTON LAKE - 10

County: Kings **Parish:** Waterford

UTM Coordinates: 21H/11W 189-533

Category: UF

Description of Area:

A deep, cold water lake unique because it is only 1 of 2 such lakes in the province containing a native arctic char population. Part of the Big Salmon River drainage system.

Sources of Information

Publications:

Personal Communication:

Pettigrew

PICADILLY MOUNTAIN - 11

County: Kings **Parish:** Cardwell

UTM Coordinates: 21H/11W 145-657

Category: ER

Description of Area:

This proposed ecological reserve is a mixed hardwood forest of 325 acres located on an upland ridge. The area is an example of the northern tolerant hardwood sugar maple - beech association with a particularly diverse species composition of tree, shrub and ground vegetation. Additional descriptive information can be found in Wein (1975).

Sources of Information

Publications:

Wein 1975

Personal Communication:

Taylor

THORNE BROOK - 12

County: Kings **Parish:** Havelock, Studholm

UTM Coordinates: 210/5E 788-535

Category: DW

Description of Area:

A deer wintering area located approximately between the head of Thorne Brook and head of Millstream. Now being cut and planted, a drastic change in habitat is taking place with the forest being replaced by plantations.

Sources of Information

Publications:

Personal Communication:

Pettigrew

DICKS LAKE - 13

County: Kings **Parish:** Hammond

UTM Coordinates: 21H/11W 097-469

Category: UF

Description of Area:

A lake on the northwest branch of the Big Salmon River and the only one in the province with a self sustaining population of rainbow trout .

Sources of Information

Publications:

Personal Communication:

Pettigrew

KENNEBECASIS RIVER - 14

County: Kings **Parish:** Norton, Springfield

UTM Coordinates: 21G/8E 335-345

Category: SN

Description of Area:

Salmon rearing areas are located on this river between Norton and Goshen(in Albert County), and include Millstream, Smith Creek, Trout Brook and the south branch of the Kennebecasis.

Sources of Information

Publications:

Personal Communication:

Pettigrew

BELLEISLE BAY HEADWATERS - 15

County: Kings **Parish:** Springfield

UTM Coordinates: 21H/12W 785-600

Category: W

Description of Area:

A key wetland area of good quality. A variety of rare plants is also found along some of the coves of Belleisle Bay.

Sources of Information

Publications:	Personal Communication:
Hinds 1982	Stewart

BLOOMFIELD MARSH - 16

County: Kings **Parish:** Norton

UTM Coordinates: 21H/12W 840-500

Category: W

Description of Area:

A flood plain marsh of about 75 acres located below Bloomfield on the Kennebecasis River. An important Canada goose staging area in the spring.

Sources of Information

Publications:

Personal Communication:

Stewart

PASSAKEAG MARSH - 17

County: Kings **Parish:** Norton

UTM Coordinates: 21H/12W 845-495

Category: W

Description of Area:

A 350 acre flood plain marsh of good quality on the Kennebecasis River.

Sources of Information

Publications:

Personal Communication:

Stewart

LOWER KENNEBECASIS MARSH - 18

County: Kings **Parish:** Hampton

UTM Coordinates: 21H/12W 805-488

Category: W

Description of Area:

A 50 acre managed flood plain marsh of good quality on the Kennebecasis River.

Sources of Information

Publications:

Personal Communication:

Stewart

OSSEKEAG MARSH - 19

County: Kings **Parish:** Hampton

UTM Coordinates: 21H/12W 805-480

Category: W

Description of Area:

A 100 acre flood plain marsh of good quality on the Kennebecasis River.

Sources of Information

Publications:

Personal Communication:

Stewart

RAVINE BROOK MARSH - 20

County: Kings **Parish:** Hampton

UTM Coordinates: 21H/12W 774-465

Category: W

Description of Area:

A managed 125 flood plain marsh of good quality within the town of Hampton.

Sources of Information

Publications:

Personal Communication:

Stewart

HAMPTON TALUS SLOPE - 21

County: Kings **Parish:** Norton

UTM Coordinates: 21H/12W 789-484

Category: ER

Description of Area:

A 106 acre forested talus slope with a rich canopy of sugar maple and red oak on the upper slope and a cherry-spruce forest on the logged and grazed lower slope. The flora includes rare herbaceous plants. Additional descriptive information can be found in Wein (1975).

Sources of Information

Publications:

Wein 1975

Personal Communication:

Taylor

HAMPTON FRESHWATER MARSH - 22

County: Kings Parish: Hampton

UTM Coordinates: 21H/12W 780-465

Category: W, ER, BB

Description of Area:

An extensive freshwater marsh of 2955 acres composed of a series of backwaters and arms of the Kennebecasis River. This eutrophic marsh is flooded every spring but is nonetheless important for waterfowl production and during migration. One of the best, species diverse, marshes in the province. A prime area for duck hunters and furbearer trappers. The low filtering capacity of the soils bordering the marsh may contribute to groundwater contamination if adjacent areas are developed. Urbanization of surrounding areas may be creating erosion and siltation problems in parts of the marsh. Bald eagles have nested on the area in the last 5 years, but not recently. Ospreys also breed in the marsh.

Sources of Information

Publications:

Choate 1973
Choate 1978
Stocek and Pearce 1981
Wein 1975

Personal Communication:

Baird
Cartwright
Christie
Pettigrew
Stewart
Stocek
Taylor

HAMMOND RIVER - 23

County: Kings Parish: Hampton, Upham, Hammon

UTM Coordinates: 21H/5 725-380

Category: SN

Description of Area:

The section of this river from Nauwigewauk to Hammondvale, and the associated tributaries, are important as a salmon spawning and rearing area.

Sources of Information

Publications:

Personal Communication:

Pettigrew

EVANDALE MARSH - 24

County: Kings Parish: Greenwich

UTM Coordinates: 21G/9E 315-545

Category: W

Description of Area:

A flood plain marsh on the lower Saint John River, about 215 acres in size and of good quality.

Sources of Information

Publications:

Personal Communication:

Stewart

HOG ISLAND - 25

County: Kings Parish: Greenwich

UTM Coordinates: 21G/9 330-486

Category: RE

Description of Area:

This island, located in the lower Saint John River near the confluence with Belleisle Bay, is the site of a bald eagle nest tree used sporadically in recent years. The island is grazed by cattle and they appear to have an adverse impact on these breeding birds.

Sources of Information

Publications:	Personal Communication:
Stocek and Pearce 1981	Stocek

GRASSY ISLAND - 26

County: Kings Parish: Greenwich

UTM Coordinates: 21G/9E 294-444

Category: W, BB, UB

Description of Area:

A 132 acre good quality marsh in the lower Saint John River near Oak Point. Important for spring migrating waterfowl as a feeding area, the island has experienced severe erosion because of overgrazing by free roaming cattle. Also used for nesting and loafing by waterfowl. A small common tern colony is established as well. Furbearers are commonly trapped on the island.

Sources of Information

Publications:

Choate 1973
Choate 1978

Personal Communication:

Baird
Cartwright
Christie
Gorham

ISLE OF PINES - 27

County: Kings Parish: Greenwich

UTM Coordinates: 21G/8E 275-418

Category: W, BB

Description of Area:

A 56 acre island surrounded by 128 acres of marsh and located in the lower Saint John River south of Grassy Island. It serves as an important area for nesting, feeding and loafing waterfowl and suitable habitat for furbearers.

Sources of Information

Publications:

Choate 1973
Choate 1978

Personal Communication:

Cartwright
Christie
Gorham

MOUTH OF NEREPIS RIVER - 28

County: Kings Parish: Westfield

UTM Coordinates: 21G/8W 138-286

Category: W, BB

Description of Area:

A marsh of about 800 acres at the lower end of the Nerepis River and Goose Creek. Important for waterfowl during the breeding season and during migration and for aquatic furbearers. Ospreys also nest on the area.

Sources of Information

Publications:

Choate 1973
Choate 1978
Christie 1978
Stocek and Pearce 1982

Personal Communication:

Baird
Cartwright
Christie
Stewart
Stocek

LOCH ALVA - 29

County: Kings (Saint John, in part) Parish: Westfield (Musquash, in part)

UTM Coordinates: 21G/8W 095-165

Category: ER, UF

Description of Area:

A large, deep, cold water lake supporting both lake trout and landlocked salmon. On the eastern shore of the lake in Kings County is a 30 acre relic stand of red spruce, very rare in the province today. This ecological reserve is characteristic of the large red spruce stands which existed during colonial times. See Wein (1975) for additional descriptive information about the reserve.

Sources of Information

Publications:

Wein 1975

Personal Communication:

Ayer

Cronin

Taylor

ENVIRONMENTALLY SIGNIFICANT AREAS
SAINT JOHN COUNTY

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Little Salmon River	30	49
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LITTLE SALMON RIVER - 30

County: Saint John Parish: St. Martins

UTM Coordinates: 21H/6 219-376

Category: ER

Description of Area:

A steep river gorge created by water erosion which typifies the coastal area between Saint John and Alma. The area includes the estuarine waters of the Little Salmon River and boasts a diverse floral composition. The 550 acre area also contains some very interesting geological formations and the steep gorge has great aesthetic appeal. Additional descriptive information can be found in Wein (1975).

Sources of Information

Publications:

Wein 1975

Personal Communication:

Taylor

BIG SALMON RIVER - 31

County: Saint John Parish: St. Martins

UTM Coordinates: 21H/6 115-325

Category: SN

Description of Area:

Salmon spawning and nursery areas of importance here are located between the mouth of the river and Walton Lake. The northwest branch of the river also supports spawning salmon.

Sources of Information

Publications:

Personal Communication:

Pettigrew

QUACO BAY - 32

County: Saint John Parish: St. Martins

UTM Coordinates: 21H/5 015-243

Category: UB

Description of Area:

This area, specifically the mud flats, has been identified as important for feeding shore birds. The great diversity of species and not necessarily their numbers is of importance here.

Sources of Information

Publications:	Personal Communication:
Christie 1978	Hicklin

ST. MARTINS MARSH - 33

County: Saint John Parish: St. Martins

UTM Coordinates: 21H/5 005-237

Category: W

Description of Area:

The only significant coastal marsh between Saint John and Fundy National Park. Originally reclaimed for agriculture, the dikes are now in disrepair. This brackish water marsh produces waterfowl, mainly black ducks.

Sources of Information

Publications:

Personal Communication:

Baird

Christie

Stewart

BLACK RIVER - 34

County: Saint John Parish: Simond

UTM Coordinates: 21H/5 795-155

Category: SN

Description of Area:

A small salmon river with spawning and nursery areas from the mouth to Garnet Settlement. Urbanization is becoming a problem on this waterway.

Sources of Information

Publications:

Personal Communication:

Pettigrew

CAPE SPENCER - 35

County: Saint John Parish: Simond

UTM Coordinates: 21H/4W 714-085

Category: ER

Description of Area:

This coastal area of 347 acres is representative of the many high cliffs along the Bay of Fundy. The balsam fir forest has been severely attacked by the spruce budworm and small areas within the proposed reserve have been logged. Additional descriptive information can be found in Wein (1975).

Sources of Information

Publications:

Christie 1978
Wein 1975

Personal Communication:

RED HEAD MARSH - 36

County: Saint John Parish: Saint John

UTM Coordinates: 21G/8 343-163

Category: W, BB

Description of Area:

A 250 acre cattail marsh in East Saint John. Very important for breeding waterfowl as an area of high production. Used by other aquatic birds for breeding also including shorebirds and the rarer least bittern. Industrial and municipal growth have had an impact on the area but the extent is uncertain. This has included wood fiber effluents, domestic sewage, landfill and siltation.

Sources of Information

Publications:

Christie 1978

Personal Communication:

Christie
Gorham
Pearce
Stewart

COURTNEY BAY - 37

County: Saint John Parish: Saint John

UTM Coordinates: 21G/8E 318-178

Category: UB

Description of Area:

A tidal bay and sewage flat in East Saint John. Fall concentrations of shorebirds, especially semipalmated plovers, are important here but limited food supplies, combined with raw sewage and oil pollution, reduce the attractiveness of the area to the birds.

Sources of Information

Publications:

Choate 1978
Christie 1978

Personal Communication:

Christie
Hicklin

SAINTS REST MARSH - 38

County: Saint John Parish: Saint John

UTM Coordinates: 21G/1E 260-115

Category: W, UB

Description of Area:

A tidal marsh of about 500 acres in West Saint John surrounded by fields and coniferous woods. Very important for migrating waterfowl in the spring and fall. The great diversity of bird life here is unique. This is part of a large area of tidal mud flats that extend from Manawagonish Cove to Lorneville Harbour. Consequently, this broad area is a most important one for shorebirds for feeding and roosting. The marsh is enriched with treated effluent from a secondary sewage treatment plant. Urbanization surrounding the marsh has had a moderate impact, including the effects of traffic, noise, smoke, etc.

Sources of Information

Publications:

Choate 1978

Christie 1978

Saint John Planning Advisory Committee 1975

Personal Communication:

Christie

Gorham

Hicklin

Pearce

Stewart

MANAWAGONISH ISLAND - 39

County: Saint John Parish: Saint John

UTM Coordinates: 21G/1 275-100

Category: CI, BB

Description of Area:

An island located off Saints Rest Marsh in West Saint John. Important as a breeding site for double-crested cormorants (2000 + pairs), great blue herons and various gulls. Impacts to the area include the dumping of dredged materials and tourist disturbances (probably minor) during the breeding months of June and July via transportation by charter boats.

Sources of Information

Publications:

Air Photo Analysis Assoc. 1976.

Christie 1978

Personal Communication:

Christie

Gorham

Smith

MUSQUASH SALT MARSH - 40

County: Saint John Parish: Musquash

UTM Coordinates: 21G/1W 121-068

Category: W, ER, BB, UB

Description of Area:

A 1615 acre salt marsh where the Musquash River empties into the Bay of Fundy and a characteristic example of salt marsh ecosystems found along the coast. A more complete description of the area can be found in Wein (1975). Important for the variety of aquatic and terrestrial birds that nest on the area and for migrant shorebirds. Waterfowl use the marsh for feeding and nesting. One of the few large salt marshes remaining in the province which is relatively unaltered by the activities of man, this is the largest tidal marsh west of Albert County. The river that drains the marsh is one of the most important elver (eel) habitats on the Fundy coast and the estuary provides a sea-run brook trout fishery.

Sources of Information

Publications:

Choate 1978
Christie 1978
Groom 1975
Wein 1975

Personal Communication:

Ayer
Choate
Christie
Cronin

ANDERSON LAKE - 41

County: Saint John Parish: Musquash

UTM Coordinates: 21G/1W 088-044

Category: W

Description of Area:

A managed fresh water marsh of good quality located southeast of the Musquash Salt Marsh.

Sources of Information

Publications:

Personal Communication:

Stewart

EAST MUSQUASH - 42

County: Saint John (Charlotte, in part) Parish: Musquash (Lepreau, in part)

UTM Coordinates: 21G/1W 015-115

Category: DW

Description of Area:

A moderate sized deer wintering area to the south of Seven Mile Lake.

Sources of Information

Publications:

Personal Communication:

Reid

ENVIRONMENTALLY SIGNIFICANT AREAS

CHARLOTTE COUNTY (MAINLAND)

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St. Croix River	70	90

EAST LONG LAKE - 43

County: Charlotte (Queens, in part) Parish: Clarendon, (Petersville, in part)

UTM Coordinates: 21G/7E 932-288

Category: DW

Description of Area:

A large area used by moose, particularly during the winter, for shelter and food and extending from Moose Lake in the north to, and including Crystal Lake in the south, and from "A" Lake in the west to Queens Lake in the east.

Sources of Information

Publications:

Personal Communication:

Reid

NEW RIVER - 44

County: Charlotte Parish: Lepreau, Pennfield

UTM Coordinates: 21G/2E 954-006

Category: SN

Description of Area:

A river with salmon spawning and nursery areas, but cascades and falls at the mouth of river allow salmon passage only if and when water is high.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

POCOLOGAN RIVER - 45

County: Charlotte Parish: Pennfield

UTM Coordinates: 21G/2E 894-993

Category: SN

Description of Area:

A river with a moderate amount of salmon rearing area. Low water may concentrate the fish near the mouth in a tidal basin, prohibiting upstream passage.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

LITTLE TOMOOWA LAKE - 46

County: Charlotte **Parish:** Clarendon

UTM Coordinates: 21G/7E 858-255

Category: ER

Description of Area:

This 215 acre proposed ecological reserve is an example of a bog surrounding and invading a lake. Vegetative changes from rooted aquatics to a stunted black spruce forest offer excellent opportunity to study bog succession. While the area is undisturbed by man, beavers have dammed the drainage several times in the past. Wein (1975) provides additional descriptive information.

Sources of Information

Publications:

Wein 1975

Personal Communication:

Taylor

SOUTH OROMOCTO LAKE - 47

County: Charlotte Parish: Clarendon

UTM Coordinates: 21G/7E 845-315

Category: UF

Description of Area:

An excellent cold water lake providing outstanding brook trout fishing for a lake of its size and identified as very sensitive to acidification (< 2 mg/l alkalinity).

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

Spavold

WEST LONG LAKE - 48

County: Charlotte Parish: Clarendon

UTM Coordinates: 21G/7E 820-250

Category: UF

Description of Area:

A cold water lake supporting a self sustaining lake trout population, 1 of 11 in the province. Considerable logging has currently opened up the lake on all sides.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

CLEAR LAKE - 49

County: Charlotte Parish: Pennfield

UTM Coordinates: 21G/2E 805-105

Category: UF

Description of Area:

A pristine, clear, cold water lake managed for landlocked salmon. Shallow soils on steep shorelines make this a sensitive area.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

LAKE ANTHONY - 50

County: Charlotte Parish: Pennfield

UTM Coordinates: 21G/7E 785-155

Category: UF

Description of Area:

A pristine, springfed cold water lake managed for landlocked salmon; a classic oligotrophic lake of great aesthetic appeal.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

McDOUGALL LAKE - 51

County: Charlotte Parish: St. George

UTM Coordinates: 21G/7W 744-213

Category: DW

Description of Area:

A large deer wintering area between McDougall Lake and the Magaguadavic River.

Sources of Information

Publications:

Personal Communication:

Reid

LAKE UTOPIA - NORTH - 52

County: Charlotte Parish: St. George

UTM Coordinates: 21G/2W 740-088

Category: RE

Description of Area:

A bald eagle breeding site at the head of the lake.

Sources of Information

Publications:	Personal Communication:
Stocek and Pearce 1981	Stocek

LAKE UTOPIA - WEST - 53

County: Charlotte Parish: St. George

UTM Coordinates: 21G/2W 719-040

Category: RE

Description of Area:

A bald eagle breeding site near the lake.

Sources of Information

Publications:	Personal Communication:
Stocek and Pearce 1981	Stocek

MAGAGUADAVIC RIVER - 54

County: Charlotte Parish: St. George, Dumbarton

UTM Coordinates: 21G/2W 710-994

Category: DW, SN

Description of Area:

A river with considerable salmon rearing area, second most in the Region. Additionally, a large deer wintering area centered at 658-032 is located along the river from about Kedron Brook to the county line.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

Reid

PISKAHEGAN RIVER - 55

County: Charlotte Parish: St. George

UTM Coordinates: 21G/7W 662-3451

Category: SN

Description of Area:

A river with a small spawning salmon population. It is one of the tributaries, however, that is of most concern here. Hatch Brook, with its excellent spawning and rearing area for brook trout, has been drastically altered by the tungsten mining operation at Mt. Pleasant. Siltation is the big problem, not chemical, although fluoride poisoning from the mine site is a potential on both the brook and the river. The brook is in need of immediate reclamation.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

DIGDEQUASH LAKE - EAST - 56

County: Charlotte Parish: St. George, St. Patrick

UTM Coordinates: 21G/7E 655-125

Category: DW

Description of Area:

A large deer wintering area to the east of Digdequash Lake between Clarence Brook and Bonny River.

Sources of Information

Publications:

Personal Communication:

Reid

DIGDEQUASH LAKE - WEST - 57

County: Charlotte **Parish:** St. Patrick

UTM Coordinates: 21G/2W 589-109

Category: DW

Description of Area:

A moderate sized deer wintering area to the west of Digdequash Lake along the Digdequash River.

Sources of Information

Publications:

Personal Communication:

Reid

DIGDEQUASH RIVER - 58

County: Charlotte Parish: St. Patrick, Dumbarton, St. James

UTM Coordinates: 21G/2W 604-061

Category: SN

Description of Area:

A river with considerable salmon spawning and nursery area. Natural falls at the mouth of the river obstruct the upstream passage of fish.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

CHAMCOOK LAKE - 59

County: Charlotte Parish: St. Croix, St. Andrews

UTM Coordinates: 21G/3E 500-008

Category: UF

Description of Area:

A cold water lake supporting both lake trout (1 of 11 in the province) and landlocked salmon. The lake also provides water for a nearby salmon hatchery and for the town of St. Andrews. Ospreys also nest in the meadows of the northwest arm.

Sources of Information

Publications:

Stocek and Pearce 1982

Personal Communication:

Ayer
Cronin
Stocek

LIMEBURNERS LAKE - 60

County: Charlotte Parish: St. Croix

UTM Coordinates: 21G/3 490-045

Category: RE

Description of Area:

The concentration of breeding ospreys to the west and northwest of the lake makes this an important area.

Sources of Information

Publications:	Personal Communication:
Stocek and Pearce 1982	Stocek

WAWEIG RIVER - 61

County: Charlotte Parish: St. Croix, St. David

UTM Coordinates: 21G/3 460-095

Category: SN

Description of Area:

A small river with spawning and nursery areas for salmon. The small run of salmon is often coralled because of low water. Ospreys also nest along the river.

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

Stocek

ST. CROIX MOUNTAIN - 62

County: Charlotte **Parish:** St. David

UTM Coordinates: 21G/13 645-006

Category: RE

Description of Area:

The site of a bald eagle nest tree on the side of the hill, east of Oak Bay.

Sources of Information

Publications:

Personal Communication:

Stocek

DENNIS STREAM - 63

County: Charlotte Parish: St. Stephen, St. David

UTM Coordinates: 21G/3W 368-055

Category: SN

Description of Area:

A stream providing rearing habitat for both salmon and sea run brook trout .

Sources of Information

Publications:

Personal Communication:

Ayer

Cronin

BAILLIE SETTLEMENT - 64

County: Charlotte Parish: St. James

UTM Coordinates: 21G/6 348-245

Category: ER

Description of Area:

Located near Baillie Settlement, this eastern white cedar stand of 30 acres is typical of a cedar swamp ecosystem. The diverse lower vegetation includes the rare lady's-slipper. Other descriptive information can be found in Wein (1975).

Sources of Information

Publications:
Wein 1975

Personal Communication:
Taylor

CRANBERRY LAKE - 65

County: Charlotte Parish: St. James

UTM Coordinates: 21G/6W 344-185

Category: W

Description of Area:

A managed lake basin marsh, 150 acres, of good quality located near Moores Mills.

Sources of Information

Publications:

Personal Communication:

Stewart

THREE BROOKS MARSH - 66

County: Charlotte Parish: St. James

UTM Coordinates: 21G/6W 300-361

Category: W

Description of Area:

A managed 1700 acre sedge meadow of good quality located north of the Canoose Flowage.

Sources of Information

Publications:

Personal Communication:

Stewart

CANOOSE FLOWAGE - 67

County: Charlotte Parish: St. James

UTM Coordinates: 21G/6 295-283

Category: W

Description of Area:

A lake basin of 1725 acres with good potential for waterfowl utilization with proper water regime.

Sources of Information

Publications:

Personal Communication:

Baird

Stewart

GREEN BROWN BROOK - 68

County: Charlotte Parish: St. James

UTM Coordinates: 21G/8 290-216

Category: W

Description of Area:

A 75 acre beaver meadow south of Canoose Flowage, of good quality

Sources of Information

Publications:

Personal Communication:

Stewart

KING BROOK LAKE - 69

County: Charlotte Parish: St. James

UTM Coordinates: 21G/6 250-210

Category: W, BB

Description of Area:

A 300 acre lake basin marsh, south of Canoose Stream, probably the most productive inland marsh in the county.

Sources of Information

Publications:

Personal Communication:

Stewart

ST. CROIX RIVER - 70

County: Charlotte Parish: St. Dufferin, St. James

UTM Coordinates: 21G/3 500-930

Category: ER, RE, DW, SN

Description of Area:

A large river with almost 3 million m^2 of salmon rearing area, the most in the Region. A joint US/Canada salmon restoration project underway here underlines its importance. At least 5 fishways need replacing and other environmental concerns such as pulp mill impacts need addressing. At least one bald eagle breeding site is located on the Canadian side of the river, but there are others on the American side.

A very extensive deer wintering area is found along the river, on both sides, from Pomeroy Ridge north almost to the county line.

A 48 acre proposed ecological reserve, St. Croix River Island (195-310, 21G/6W), is located just south of Meetinghouse Rips on the river and represents a series of forested and grassland islands and freshwater marshes. This area boasts an impressive diversity of avian species. See Wein (1975) for additional descriptive information.

Sources of Information

Publications:

Wein 1975
Stocek and Pearce 1981

Personal Communication:

Ayer
Cronin
Reid
Stocek
Taylor

ENVIRONMENTALLY SIGNIFICANT AREAS

CHARLOTTE COUNTY (MARINE)

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Ministers Island	84	105
St. Andrews	85	106
St. Croix Estuary	86	107
Grand Manan Island	87	108
Nantucket Island	88	109
Kent Island	89	110
Gannet Island, south of	90	111
Machias Seal Island	91	112

MACES BAY - 71

County: Charlotte Parish: Lepreau

UTM Coordinates: 21G/2E 920-985

Category: BB, UB

Description of Area:

This Bay provides important tidal flats for wintering purple sandpipers, perhaps the most significant along the Charlotte County coastline. In addition, the coast from Maces Bay to Blacks Harbour is important for waterfowl where, for example, concentrations of 10,000 brant can be seen . The islands in the Bay are also significant for breeding gulls, guillemots and eiders.

Sources of Information

Publications:

Choate 1978

Personal Communication:

Christie

Hicklin

Smith

THE WOLVES - 72

County: Charlotte Parish: Pennfield

UTM Coordinates: 21B/15, 21B/14 800-810

Category: CI, BB, UB

Description of Area:

A group of islands located northeast of Campbello Island in the Bay of Fundy. Perhaps the most important area for sea bird breeding outside of Grand Manan. Both inshore and pelagic species of birds can be found on the islands, including eiders, guillemots, petrels and gannets. Additionally, these islands represent the only area where harlequin ducks are known to winter in the Maritimes.

Sources of Information

Publications:

McKay 1979

Personal Communication:

Christie

Gorham

Smith

LETANG ESTUARY - 73

County: Charlotte Parish: St. George, Pennfield

UTM Coordinates: 21G/2W 733-946

Category: UB

Description of Area:

A large area located at the mouth of the Letang River, noted as a significant area for feeding and staging by waterfowl, shorebirds and gulls.

Sources of Information

Publications:

Choate 1978

McKay 1979

Personal Communication:

Christie

Smith

FRYE ISLAND GROUP - 74

County: Charlotte Parish: St. George

UTM Coordinates: 21G/2W 695-910

Category: CI, RE

Description of Area:

A group of islands in Letang Estuary near Back Bay of which Frye Island is the largest. These islands support at least a dozen pairs of breeding ospreys.

Sources of Information

Publications:

McKay 1979

Stocek and Pearce 1982

Personal Communication:

Stocek

WHITE HORSE ISLAND - 75

County: Charlotte Parish: West Isles

UTM Coordinates: 21B/14, 21B/15 678-840

Category: CI, BB

Description of Area:

An island to the east of Deer Island noted for its breeding colony of guillemots.

Sources of Information

Publications:

Choate 1978

McKay 1979

Personal Communication:

Christie

ST. GEORGE HARBOUR - 76

County: Charlotte Parish: St. George

UTM Coordinates: 21G/2W 660-970

Category: UB

Description of Area:

An estuary used by waterfowl, shorebirds and gulls for feeding and staging.

Sources of Information

Publications:	Personal Communication:
McKay 1979	Christie
	Smith

LETITE PASSAGE - 77

County: Charlotte Parish: St. George

UTM Coordinates: 21G/2W 644-904

Category: BB, UB

Description of Area:

A thoroughfare located between the mainland at Letite and the offshore island of McMaster. A major feeding, breeding and staging area for a wide variety of marine birds.

Sources of Information

Publications:

McKay 1979

Personal Communication:

Christie

Smith

WHITE ISLAND - 78

County: Charlotte Parish: West Isles

UTM Coordinates: 21B/14, 21B/15 654-832

Category: CI, RE

Description of Area:

An island located to the east of Deer Island and supporting a pair of breeding bald eagles.

Sources of Information

Publications:

McKay 1979

Stocek and Pearce 1981

Personal Communication:

Stocek

HEAD HARBOUR PASSAGE - 79

County: Charlotte Parish: West Isles, Campobello

UTM Coordinates: 21B/15 635-795

Category: BB, UB

Description of Area:

An important waterway between Deer Island and Campobello Island. This area is of national significance as a major feeding, breeding and staging locale for a wide assemblage of marine birds. The largest concentrations of sea birds in southern New Brunswick are found here. In addition, the southern end of the passage is especially important to northern phalaropes (a shorebird) where up to 2 million birds may be seen during the fall.

Sources of Information

Publications:

Choate 1978
McKay 1979

Personal Communication:

Christie
Hicklin
Smith

CAMPOBELLO ISLAND - 80

County: Charlotte Parish: Campobello

UTM Coordinates: 21B/14, 21B/15 645-740

Category: ER, CI, RE

Description of Area:

An island located at the mouth of the Bay of Fundy, southeast of Deer Island. Major fisheries operate in the offshore waters. The area is especially sensitive since not only is it a major nesting, feeding and staging location for migratory birds but it also provides aquatic feeding grounds for both fish and marine birds. Bald eagles and ospreys nest on the island as well. The Admiral Owen House, near Welshpool, is an historic site as is the Roosevelt residence. Campobello Liberty Point (635-664), a 90 acre proposed reserve of wind-dominated climax vegetation,is located on rugged rocky terrain of the island. Wein (1975) gives more descriptive information on this site. Fish plant and industrial wastes are the impacts of note on this island.

Sources of Information

Publications:

Choate 1978

McKay 1979

Stocek and Pearce 1981

Wein 1975

Personal Communication:

Christie

Smith

Stocek

Taylor

DIGDEGUASH HARBOUR - 81

County: Charlotte Parish: St. Patrick

UTM Coordinates: 21G/2W 660-030

Category: UB

Description of Area:

An area used by waterfowl, shorebirds and gulls for feeding and staging.

Sources of Information

Publications:	Personal Communication:
Choate 1978	Christie
McKay 1979	Smith

DEER ISLAND - 82

County: Charlotte Parish: West Isles

UTM Coordinates: 21G/2 600-850

Category: C1, RE, UB

Description of Area:

An island to the northwest of Campbello Island providing excellent fishing grounds for a variety of fish. Major herring and ground fisheries operate off the island and many types of marine birds also utilize the fishery. Bald eagles and ospreys nest here as well. The southern tip of the island is noted as a major feeding, breeding and staging area for a wide assemblage of marine birds. Fish plant and industrial wastes are of concern here.

Sources of Information

Publications:

McKay 1979

Stocek and Pearce 1981

Personal Communication:

Christie

Smith

Stocek

HARDWOOD ISLAND - 83

County: Charlotte Parish: St. Patrick

UTM Coordinates: 21G/2W 575-983

Category: ER, CI, BB

Description of Area:

This offshore island of 36 acres in Passamaquoddy Bay has a large and diverse avian population that is moderately affected by human activity. The largest great blue heron colony in the Bay of Fundy is located here. Other nesting birds include ospreys and herring gulls. The island is an important stopover for migratory birds in the spring and fall. Additional descriptive information can be found in Wein (1975).

Sources of Information

Publications:

Wein 1975

Personal Communication:

Christie

Smith

Stocek

Taylor

MINISTERS ISLAND - 84

County: Charlotte Parish: St. Andrews

UTM Coordinates: 21G/3E 540-965

Category: CI, UB

Description of Area:

An inshore island northeast of St. Andrews. This area provides feeding grounds for wintering great cormorants and a wintering area for purple sandpipers that use the tidal mud flats. Ospreys nest on the island during the summer. A residence of historical value is the only development.

Sources of Information

Publications:

McKay 1979

Personal Communication:

Christie

Gorham

Hicklin

Stocek

ST. ANDREWS, HEADLAND - 85

County: Charlotte Parish: St. Andrews

UTM Coordinates: 21G/3E 545-923

Category: UB

Description of Area:

An area used extensively by wintering purple sandpipers although the coastal flats from Point Lepreau to St. Andrews are used by these wintering birds as well. Additionally, the St. Andrews-Chamcook area is a feeding and staging area of regional significance for waterfowl, shorebirds and gulls. Ospreys also nest in the headland vicinity.

Sources of Information

Publications:

Choate 1978

McKay 1979

Personal Communication:

Christie

Hicklin

Smith

Stocek

ST. CROIX ESTUARY - 86

County: Charlotte Parish: St. David, Dufferin, St. Croix

UTM Coordinates: 21G/3E 458-044

Category: UB

Description of Area:

The estuary of the St. Croix River is one of regional significance in providing a feeding and staging area for ducks, geese, shorebirds and gulls.

Sources of Information

Publications:

McKay 1979

Personal Communication:

Christie

Smith

GRAND MANAN ISLAND - 87

County: Charlotte Parish: Grand Manan

UTM Coordinates: 21B/6, 7, 10, 11, 21 740-510

Category: W, CI, RE UB

Description of Area:

A unique large offshore island renowned, at least, for its seabird populations and an extremely important area for shellfish and finfish. Additionally, it supports wintering populations of shorebirds and its offshore waters abound with aquatic mammals. Castalia Marsh, on the island (778-544), is a special place with its diversity of microhabitats and birdlife, including a number of rare species. Both the bald eagle and the osprey nest on the island and a variety of rare plants is also found here.

Sources of Information

Publications:

Hinds 1982
McKay 1979
Squires 1976
Stocek and Pearce 1981

Personal Communication:

Christie
Hicklin
Hinds
Pearce
Smith
Spavold
Stocek

NANTUCKET ISLAND - 88

County: Charlotte Parish: Grand Manan

UTM Coordinates: 21B/10 804-516

Category: CI, BB

Description of Area:

An inshore island east of Grand Manan Island with breeding herring gulls and night herons.

Sources of Information

Publications:

Choate 1978

McKay 1979

Personal Communication:

Christie

KENT ISLAND - 89

County: Charlotte Parish: Grand Manan

UTM Coordinates: 21B/10 450-390

Category: CI, BB

Description of Area:

One of the Three Islands south of Grand Manan Island. A variety of sea birds nest on the island including a large colony of eiders.

Sources of Information

Publications:

Choate 1978

McKay 1979

Personal Communication:

Baird

Christie

Smith

LEDGES SOUTH OF GANNET ISLAND - 90

County: Charlotte Parish: Grand Manan

UTM Coordinates: 21B/6, 7, 10, 11, 21 700-300

Category: CI, BB

Description of Area:

These rocks south of Grand Manan Island support the only breeding population of murres in the province.

Sources of Information

Publications:

Choate 1978

McKay 1979

Personal Communication:

Smith

MACHIAS SEAL ISLAND - 91

County: Charlotte Parish: Grand Manan

UTM Coordinates: 21B/6, 7, 10, 11, 21 508-292

Category: ER, CI, BB

Description of Area:

A 30 acre coastal island located southeast of Grand Manan Island in the extreme south of the province. The island, a Federal Migratory Bird sanctuary since 1944, is a valuable nesting area for sea birds, particularly for the arctic tern and the Atlantic puffin. Other species of birds nest on the island as well. The lush meadow vegetation reflects the guano enrichment. This treeless island is the southern limit of the breeding range of the puffin. Unintentional disturbance by tourists is an impact of some concern. See Wein (1975) for additional descriptive information.

Sources of Information

Publications:

Choate 1978

Wein 1975

Personal Communication:

Baird

Christie

Gorham

Stewart

Taylor

List of Information Sources

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4. D. Cartwright, N. B. Fish and Wildlife Branch, DNR, Fredericton, N. B. (Furbearers)
5. J. S. Choate, Environment New Brunswick, Fredericton, N. B. (Wildlife)
6. D. Christie, N. B. Museum, Saint John, N. B. (Natural History)
7. P. Cronin, N. B. Forest Service, DNR, Kingsclear, N. B. (Fisheries)
8. T. Dilworth, Univ. of N. B., Fredericton, N. B. (Mammals)
9. A. Francis, Can. Dept. of Fisheries and Oceans, Fredericton, N. B. (Fisheries)
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11. P. Hicklin, Can. Wildlife Service, Environment Canada, Sackville, N. B. (Shorebirds)
12. H. Hinds, Univ. of N. B., Fredericton, N. B. (Plants)
13. P. Pearce, Can. Wildlife Service, Environment Canada, Fredericton, N. B. (Birds, Endangered Species)
14. T. Pettigrew, N. B. Forest Service, DNR, Hampton, N. B. (Wildlife, Fisheries)
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17. J. Spavold, Environment New Brunswick, Fredericton, N. B. (Plants)
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19. R. Stocek, Maritime Forest Ranger School, Fredericton, N. B. (Wildlife, Fisheries, Endangered Species)
20. M. Taylor, Environmental Council, Fredericton, N. B. (Ecological Reserves)

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3. Choate, J. S. 1973. Wildlife Resources of the Saint John River Basin, New Brunswick. The Saint John River Basin Board Report No. 8 (a).

4. Choate, J. S. 1978. Selected Environmentally Sensitive Areas, Saint John Planning Region. Environment New Brunswick.

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QUEENS COUNTY

KINGS COUNTY

Castaway

Upper Gaspereau

Gaspereau Forks

Dam

Bronson Settlement

Harley Road

Briggs Corner

Lower Salmon Creek

Redbank

Bronson

Humphrey Corner

Chipman

Dufferin

Camp Wegesegum

Vance Landing

Coal Creek

Newcastle Centre

Newcastle Bridge

The Range

Wiggins

Flowers Cove

Cumberland Bay

Granville

GRAND LAKE GAME REFUGE

Princess Park

Dixon

Youngs Cove

Youngs Cove Road

Phillipstown

Coles Island

Daniel

Blair

Douglas Harbour

Waterborough

Union Settlement

Bagdad

Bagdad Sta

Washademoak

Scotchtown

Mill Cove

White Cove

Lakeview

Hammtown

Thornetown

Cambridge

Narrows

Salmon Creek Settlement

Perry

Thorne

Gagetown

Akerly

Mill Brook

McDonald Corner

Big Cove

Central Cambridge

Lower Cambridge

Lower Gagetown

Canaan Rapids

Forks Stream

Cherryvale

Hunters Home

Brookvale

Dubec Settlement

Perry Settlement

Head of Millstream

Gibbon

Carsonville

Queenville

White Mountain

Knightville

Jordan Mountain

Newtown

Marrtown

Snider Mountain

Highfield

Pearsonville

Pleasant Ridge

Centre Millstream

Mount Middleton

Mount Hebron

Mount Pisgah

Thomond

Collina

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Irish Settlement

Plumweseep

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Alward Creek

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Kennebecasis River

Millstream

Hammond River

Salmon Creek

Washademoak Lake

Grand Lake

Maquapit L

Mill Cove Brook

Lake

Creek

Brook

Ridge

Hill

Mountain

Settlement

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Mount Middleton

Mount Hebron

Mount Pisgah

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Salmon Creek

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Grand Lake

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Cove

Corner

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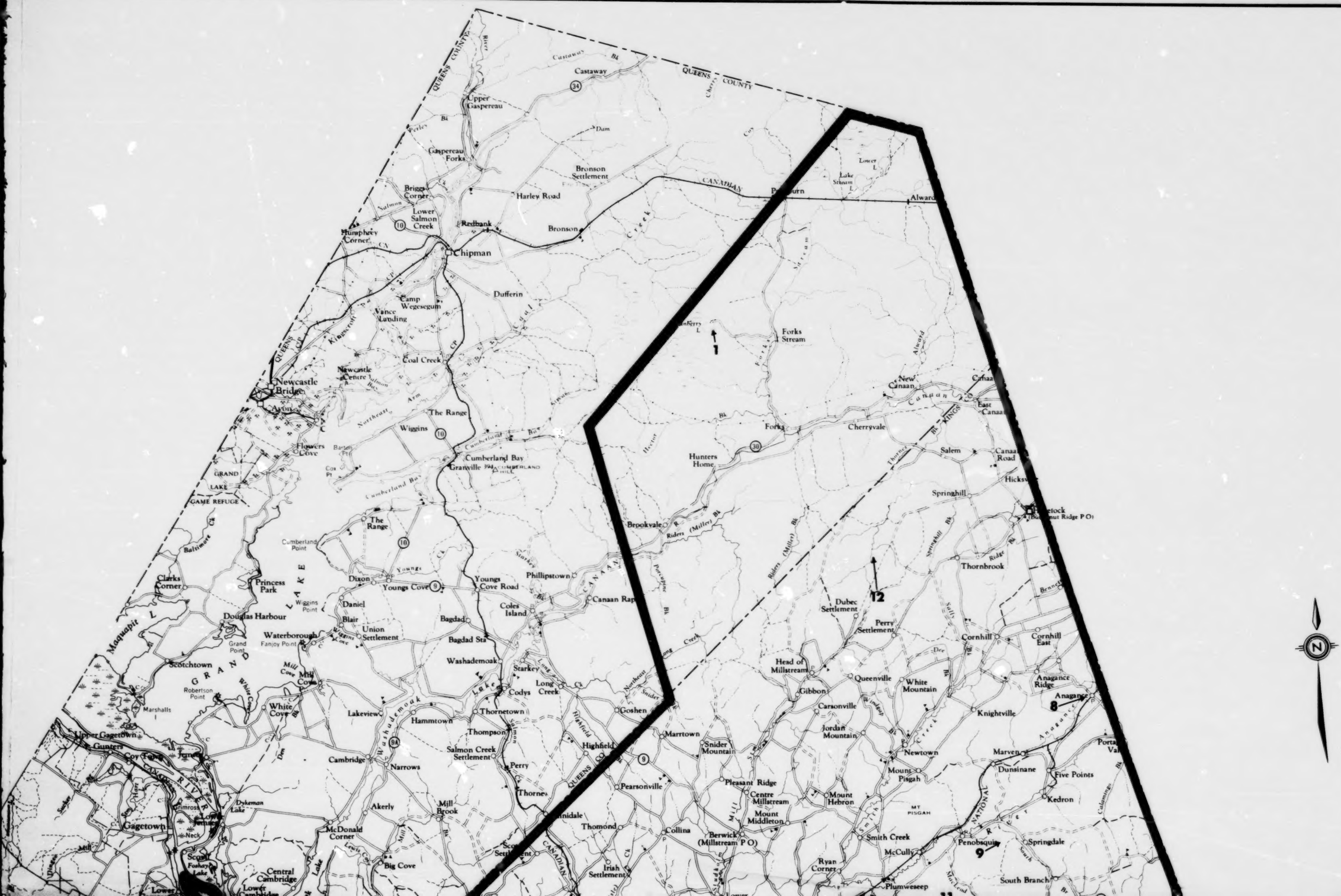
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Gunters
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Mill Brook
McDonald Corner
Big Cove
Central Cambridge
Lower Cambridge
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Snider Mountain
Pearsonville
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Irish Settlement
Scovil Settlement
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Saint Andrews
Saint Stephen
Sackville
Shediac
Dorchester
Port Elgin
Cape Tormentine
Grand Manan
Deer Island
Campobello Island
Fundy National Park
Hopewell Cape
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Albert
Hillsborough
Petitcodiac
Salisbury
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Harvey
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Waterford
Lepreau
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Quispamsis
Gondola Point
Grand Bay
Westfield
Westfield Beach
Lakewood
Lakewood Heights
Ragged Point
Ragged Point Beach
Kingston
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Upham
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Jemseg
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Campbellton
Bathurst
Miramichi
Chatham
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Bayard
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Big Indian Lake
Turtle Lake
Sherwood Lake
Mosquito
Anderson Settlement
Porter Settlement
Meredith
Lawrence Station
Watt
Tryon Settlement
Lynnfield
Baillie Settlement
Dumbarton
Honeydale
Upper Tower Hill
Central Tower Hill
Lower Tower Hill
De Wolfe
Oak Hill
Basswood Ridge
Moores Mills
Scotch Ridge
Leverville
Hewitt
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Whitmar Ridge
Clarence Ridge
Sorrel Ridge
Flume Ridge
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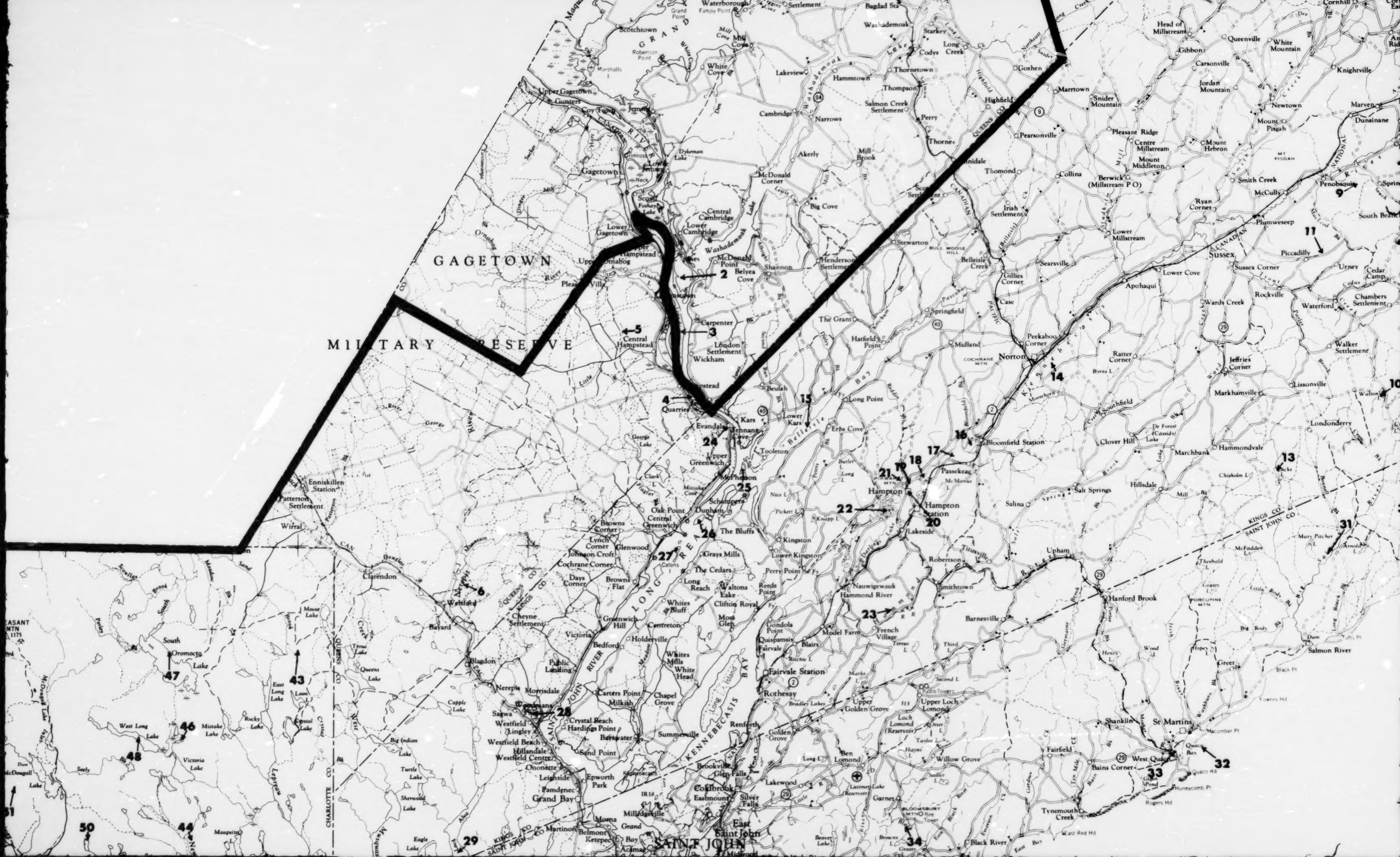
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Oak Point
Central Greenwich
Dunham
The Bluffs
Browns Corner
Lynch Corner
Glenwood
Johnson Croft
Cochrane Corner
Days Corner
Browns Flat
Grays Mills
The Cedars
Long Reach
Waltons Lake
Clifton Royal
Whites Bluff
Greenwich Hill
Centreton
Holderville
Victoria
Bedford
Whites Mills
White Head
Public Landing
Carters Point
Milkith
Chapel Grove
Renforth
Summerville
Golden Grove
Upper Golden Grove
Upper Loch Lomond
Loch Lomond (Reservoir)
Ben Lomond
Willow Grove
Fairvale Station
Rothesay
Fairvale
Quispamsis
Blairs
Model Farm
French Village
Nauwigewauk
Hammond River
Smithtown
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Hampton
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Salt Springs
Hillsdale
Clover Hill
Marchbank
Hammondvale
Londonderry
Bloomfield Station
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Jeffries Corner
Markhamville
Lissonville
Walker Settlement
Waterford
Rockville
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Urney
Cedar Camp
Plumweseep
Ryan Corner
Smith Creek
McCully
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Jordan Mountain
Carsonville
Gibbon
Queenville
White Mountain
Knightville
Head of Millstream
Cornhill
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Hanford Brook
Barnesville
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Quaco Hd
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Rogers Hd
Fairfield
Bains Corner
West Quaco
Tynemouth Creek
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East Red Hd
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Lakewood
Silver Falls
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East Saint John
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Southfield
Clover Hill
De Forest (Cassidy) Lake
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Hillsdale
Salt Springs
Salina
Mary Pitcher L
McFadden L
Theobald L
Arnold L
Porcupine Mtn
Big Rocky Pt
Black Pt
Fowlers Hd
Enniskillen
Patterson
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Clarendon
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Pamdenec
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Crystal Beach
Hardings Point
Barrwater
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Martinon
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Ketepec
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West Long Lake
Mistake Lake
Victoria Lake
Rocky Lake
Crystal Lake
Big Indian Lake
Turtle Lake
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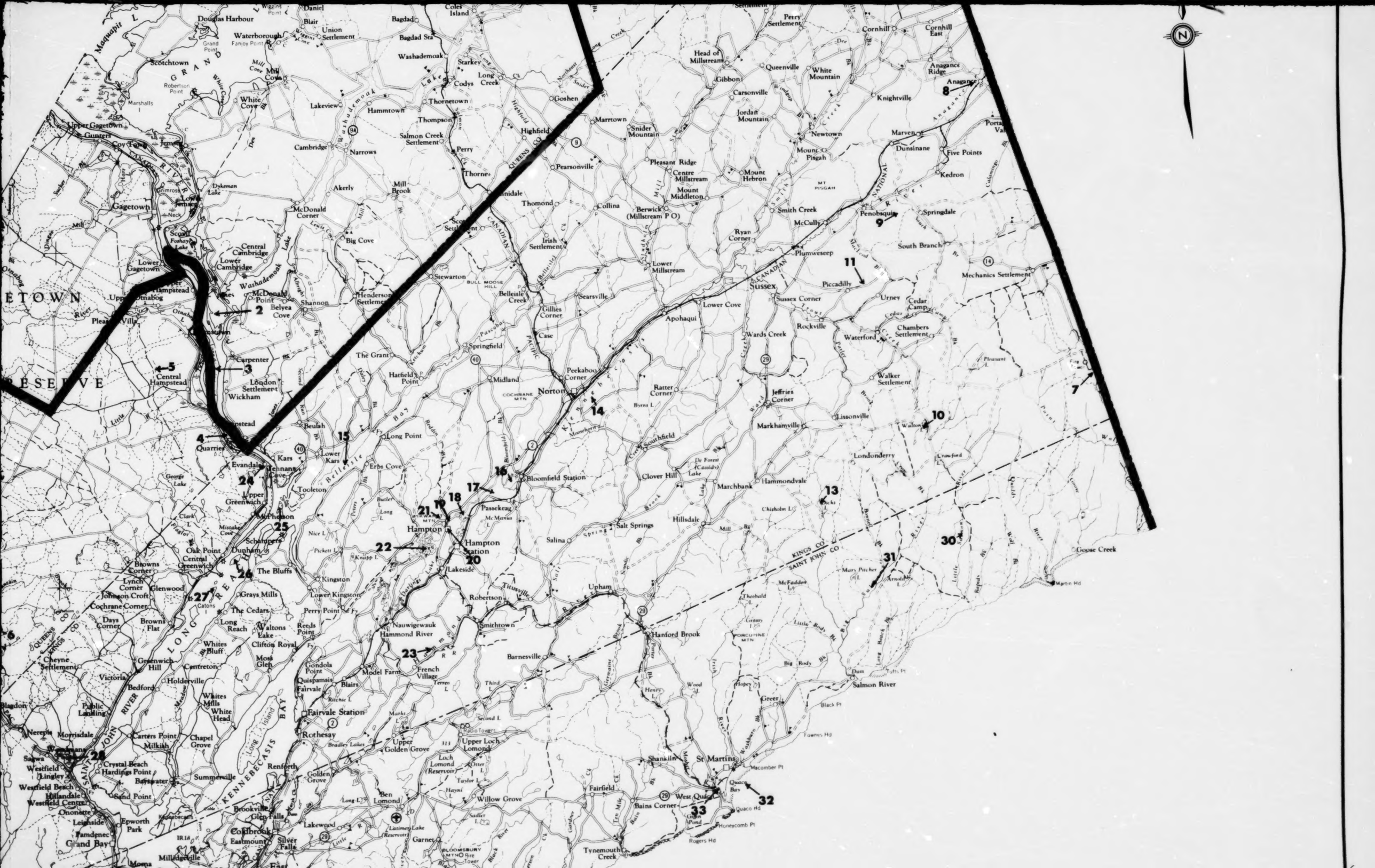
Douglas Harbour
Waterborough
Fanjoy Point
Scotchtown
Robertson Point
Marshalls
Upper Gagetown
Gunters
Coy Town
Jemseg
Gagetown
Lower Gagetown
Hampstead
Upper Hampstead
Pleasant Ville
Central Hampstead
Carpenter
London Settlement
Wickham
Quarries
Evandale
Kars
Tennans Cove
Lower Kars
Erbs Cove
Long Point
Beulah
Tooleton
Upper Greenwich
Mistaken Cove
Schaffners
Dunham
Oak Point
Central Greenwich
Browns Corner
Lynch Corner
Glenwood
Johnson Croft
Cochrane Corner
Days Corner
Browns Flat
Catons
The Bluffs
Grays Mills
The Cedars
Long Reach
Waltons Lake
Reeds Point
Clifton Royal
Moss Glen
Whites Bluff
Centreton
Holderville
Greenwich Hill
Cheyne Settlement
Victoria
Bedford
Whites Mills
White Head
Public Landing
Nerepis
Morrisdale
Carters Point
Milkish
Chapel Grove
Renforth
Summerville
Barnhartwater
Sand Point
Crystal Beach
Hardings Point
Westfield
Lingley
Westfield Beach
Hillandale
Westfield Centre
Onondaga
Leinside
Epworth Park
Fernandec
Grand Bay
Millidgeville
Moosa
Coldbrook
Eastmount
Silver Falls
Brookville
Glen Falls
Lakewood
Golden Grove
Ben Lomond
Upper Golden Grove
Loch Lomond (Reservoir)
Upper Loch Lomond
Rothesay
Fairvale Station
Blairs
Quispamsis
Fairvale
Model Farm
French Village
Gondola Point
Nauwigewauk
Hammond River
Kingston
Lower Kingston
Perry Point
Hampton
Hampton Station
Passekeag
Lakeside
Bloomfield Station
Smithtown
Robertson
Titusville
Upham
Barnesville
Hanford Brook
Salina
Salt Springs
Hillsdale
Clover Hill
Marchbank
Hammondvale
Londonderry
Goose Creek
Martin Hd
Salmon River
Greer
Black Pt
Fownes Hd
Shankin
St Martins
Macomber Pt
Quaco Bay
West Quaco
Quaco Hd
Honeycomb Pt
Rogers Hd
Bains Corner
Glen Pond
Fairfield
Tynemouth Creek
Ratter Corner
Jeffries Corner
Markhamville
Lissonville
Walton
Walker Settlement
Waterford
Chambers Settlement
Rockville
Wards Creek
Sussex
Sussex Corner
Lower Cove
Apohaqui
Piccadilly
Plumweseep
Ryan Corner
Lower Millstream
Berwick (Millstream P O)
Collina
Thomond
Irish Settlement
Belleisle Creek
Gillies Corner
Case
Searsville
Stewarton
Henderson Settlement
Belyea Cove
Shannon
McDonald Point
McDonald Corner
Central Cambridge
Lower Cambridge
Big Cove
Akerly
Mill Brook
Cambridge
Narrows
Lakeview
Hammtown
Thornetown
Thompson
Salmon Creek Settlement
Perry
Thorne
Highfield
Pearsonville
Goshen
Marrtown
Snider Mountain
Pleasant Ridge
Centre Millstream
Mount Middleton
Mount Hebron
Mount Pisgah
Smith Creek
McCully
Penobaquis
Springdale
South Branch
Mechanics Settlement
Newtown
Carsonville
Jordan Mountain
Gibbon
Queenville
Head of Millstream
Perry Settlement
Cornhill
Cornhill East
Anagance Ridge
Anagance
Knightville
White Mountain
Marven
Dunsinane
Five Points
Kedron
Starkey
Long Creek
Codys
Washademoak Lake
Grimross
Lower Jemseg
Dykeman Lake
Scovil
Foshay Lake
Hart
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Mill
Lewis
Ox Bow
Mill Cove
Mill Cove Pt
White Cove
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Wiggins Point
Daniel
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Union Settlement
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Inner Cove
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Porcupine Mtn
Cedar
Cedar Camp
Trout
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Wards Creek
Ratter Brook
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Cochrane Mtn
Bull Moose Hill
Bloomsbury Mtn
Fire Tower
Pascobac
Springfield
Midland
Norton
Peekaboo Corner
Hatfield Point
The Grant
Scovil
Kennebecasis Bay
Long Island
Marks L
Second L
Radio Towers
Bradley Lakes
Otter L
Taylor L
Hayns L
Sadler L
Latimer Lake (Reservoir)
Garnet
Willow Grove
Ten Mile Brook
Gutzlers
Cunningham
Black River
Wallace
Crawford
Little
Rapids
Mary Pitcher L
Arnold L
Theobald L
Grassy L
Porcupine Mtn
Big Rody
Little Rody
Hopey L
Wood L
Henrys L
Third L
Terreo L
Ritchie L
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Meadow
Little River
Long Island
Bay
Kennebecasis
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Queens Co
Kings Co
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National
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Anderson Settlement
Porter Settlement
Meredith
Lawrence Station
Watt
Tryon Settlement
Flume Ridge
The Flume
Maggaguadavic
Piskahegan
PLEASANT MTN 1179
Scovil Brook
Wirrel
Clarendon
Bayard
Oromocto Lake
South Oromocto Lake
Mooses Lake
Queens Lake
Capple Lake
Big Indian Lake
Turtle Lake
Sherwood Lake
Eagle Lake
Canoose Lake
Lynnfield
Baillie Settlement
Dumbarton
Honeydale
Upper Tower Hill
Central Tower Hill
Lower Tower Hill
De Wolfe Stream
Oak Hill
Basswood Ridge
Moores Mills
Scotch Ridge
Old Ridge
Maxwell
St David Ridge
Leverville
Hewitt
Rolling Dam
Whittier Ridge
Sorrel Ridge
Clarence
Clarence Ridge Brook
Elmsville
Dyer
Roix Road
Waweig
Bartlett
Bocabec
Bocabec Bay
Oak Bay
Bay Road
Benson Corner
The Ledge
Upper Bayside
Lower Bayside
Chamcook
St Andrews North
St Andrews
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Midjik Bluff
Hardwood Island
Minister Island
MacCarene
Clark Point
Letang
Letite
Back Bay
Blacks Harbour
Beaver Harbour
East Head
Deadman Head
Seely Cove
Seely Head
Red Head
MACES BAY
Barnaby Head
The Brothers
Maces Bay
Welchs Cove
Old Ridge
Dipper Harbour East
Dipper Harbour West
Point Lepreau
Little Lepreau
Chance Harbour
Pennfield Station
Pennfield Ridge
Pennfield Corner
St George
Utopia Centre
Utopia
Lake Utopia
Pocologan
Pocologan Station
New River Station
New River Beach
Lepreau
PACIFIC
Red Rock Lake
Sparks L
Clear L
Mill L
Second Falls
Digdeguash
Digdeguash Lake
Bonny River
Mosquito L
Victoria Lake
West Long Lake
Mistake Lake
Rocky Lake
Crystal Lake
East Long Lake
Loon L
Trout Lake
Queens Lake
McDougall Lake
Dam
Lake Stream
Bonny River
Lepreau River
Magaguadavic River
Digdeguash River
Canoose River
Canoose Lake
Lake
Stream
Brook
Creek
Ridge
Point
Island
Islands
Cove
Harbour
Bay
Lambertville
Stuart Town
Pendleton Island
McMaster I
Parker Island
Bliss Islands
Lambert Cove
Leonardville
DEER ISLAND
Spruce Island
White Island
Casco Island
East Quoddy Head Lighthouse
Head Harbor Island
Head Harbor Passage
Mill Cove
Wilsons Beach
Scott Head
Herring Cove
The Wolves
East Wolf Island
Fatpot Island
South Wolf Island
CHARLOTTE CO
SAINT JOHN CO
Woodland Lake
Union Mills
Milltown
Upper Mills
Little Ridge
Mayfield
Heathland
St Stephen
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SAINT JOHN PL

Environmentally
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Identification N

SCA

Miles 5 0

Kilometres 5 0 5

OF

BAY

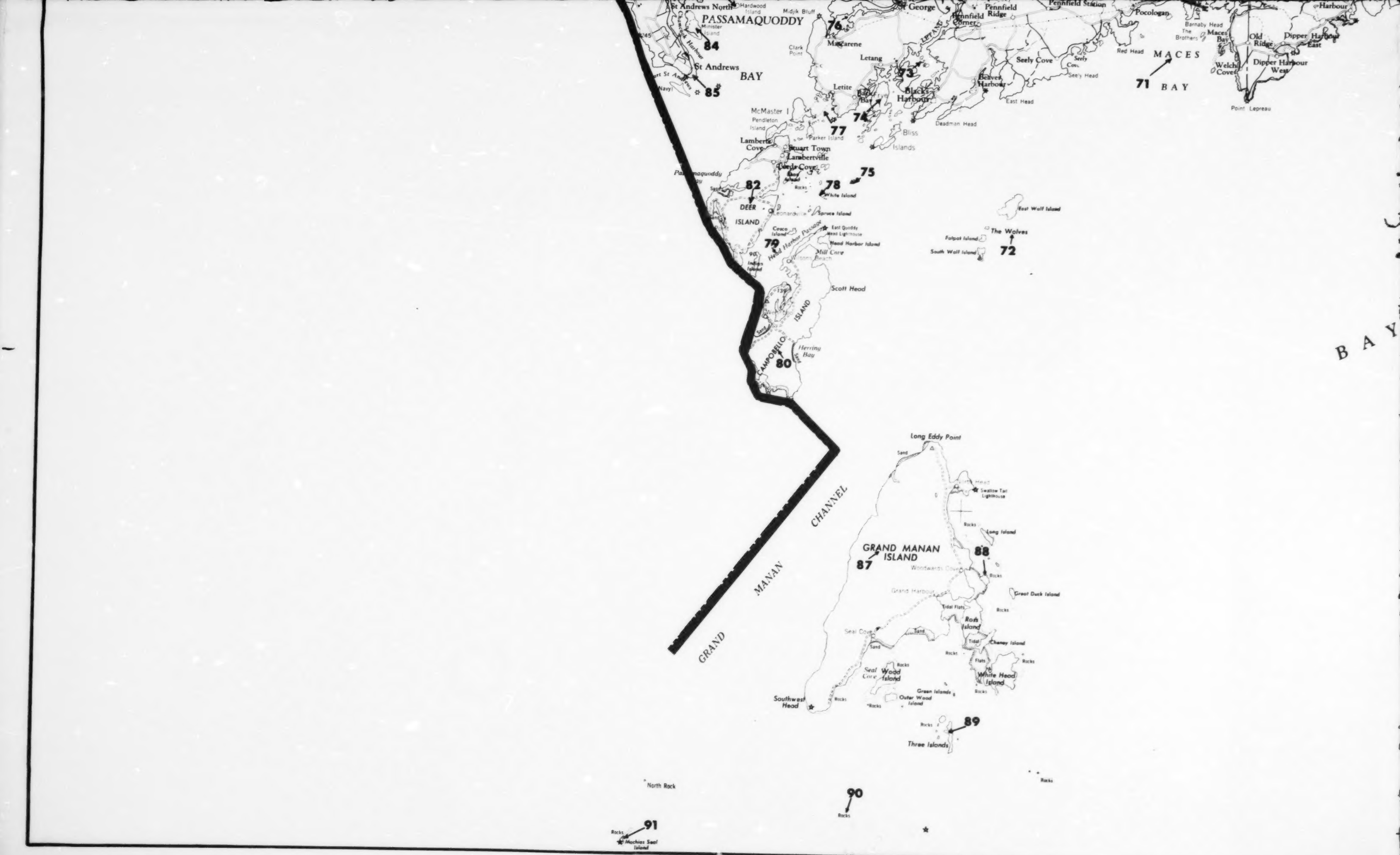
SAINT JOHN PLANNING REGION

Environmentally Significant Areas Keyed to Text by Identification Numbers 1 to 91

SCALE 1: 250,000

Miles 5 0 5 10 15 Miles

Kilometres 5 0 5 10 15 20 Kilometres


PASSAMAQUODDY
BAY
St Andrews North
Minister Island
Hardwood Island
Midjik Bluff
St George
Pennfield Ridge
Pennfield Corner
Pennfield Station
Pocologan
Harbour
Barnaby Head
The Brothers
Maces Bay
Old Ridge
Dipper Harbour East
Dipper Harbour West
Welch Cove
Point Lepreau
Red Head
MACES
BAY
Seely Cove
Seely Head
Beaver Harbour
East Head
Deadman Head
Blacks Harbour
Bliss Islands
Letang
Clark Point
Magarene
Letite
Back Bay
Back Cove
St Andrews
BAY
Navy!
McMaster I
Pendleton Island
Parker Island
Lambert Cove
Stuart Town
Lambertville
Lamb's Cove
Passamaquoddy
Bay
Racks
White Island
DEER
ISLAND
Leonardville
Spruce Island
Cosco Island
East Quoddy Head Lighthouse
Head Harbour Island
Head Harbour Passage
Mill Cove
Sand Beach
Indian Island
Scott Head
ISLAND
CAMPOBELLO
Herring Bay
East Wolf Island
The Wolves
Fairpoint Island
South Wolf Island
Long Eddy Point
Sand
Swallow Tail Lighthouse
Long Island
GRAND MANAN ISLAND
Woodwards Cove
Grand Harbour
Great Duck Island
Tidal Flats
Rocks
Seal Cove
Sand
Tidal Flats
Chaney Island
Seal Wood Island
White Head Island
Green Islands
Outer Wood Island
Southwest Head
Three Islands
North Rock
Mochias Seal Island
GRAND MANAN CHANNEL
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Barnaby Head
The Brothers
Macey Bay
Red Head
MACES
BAY
Old Ridge
Dipper Harbour East
Dipper Harbour West
Welch Cove
Point Lepreau
Seely Cove
Seely Cove
Seely Head
Beaver Harbour
East Head
71
Red Wolf Island
The Wolves
Fatpot Island
Wolf Island
72
North Head
Swallow Tail Lighthouse
Rocks
Long Island
88
Rocks
Great Duck Island
Rocks
Tidal Flats
Rock Island
Tidal
Chaney Island
Rocks
Flats
Rocks
White Head Island
Rocks
89
Rocks

SAINT JOHN PLANN

Environmentally Signif
Keyed to Text
Identification Numbe

SCALE 1: 250,000

Miles 5 0 5

Kilometres 5 0 5 10

LEGEND

SAINT JOHN PLANNING
COUNTY BOUNDARY

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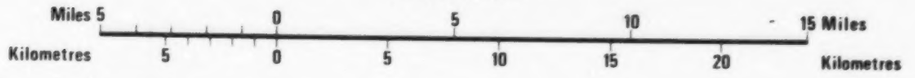
SAINT JOHN PLANNING REGION

Environmentally Significant Areas Keyed to Text by Identification Numbers 1 to 91

SCALE 1: 250,000



LEGEND

SAINT JOHN PLANNING REGION BOUNDARY

COUNTY BOUNDARY